

Application No. 10/705,533

Reply to Office Action

*REMARKS/ARGUMENTS**The Pending Claims*

Claims 1-8 and 13-27 are currently pending. Claims 1-8, 13, 14, and 26-27 are directed to a polishing pad, and claims 15-25 are directed to a method of polishing.

*Amendments to the Claims*

Claim 1 has been amended to recite that the polishing pad has a polishing surface. Support for this amendment can be found, for example, at paragraph 0025 of the specification. Claim 1 has been further amended to recite that the polishing pad is in the form of a non-porous polymer sheet, a cellular polymer foam, or sintered thermoplastic particles. Support for this amendment can be found, for example, at paragraphs 0004 and 0018-0019 of the specification. Claim 14 has been amended to recite that the polishing pad is a cellular polymer foam. Support for this amendment can be found, for example, at paragraphs 0004 and 0019 of the specification. Claims 26 and 27 are new. Support for claims 26 and 27 can be found, for example, at paragraphs 0004 and 0018 of the specification. Claims 9-12 have been canceled without prejudice. No new matter has been added by way of these amendments.

*Summary of the Office Action*

Claims 1-25 are subject to a restriction requirement under 35 U.S.C. § 121.

Claims 1-5 and 13 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent 5,470,944 (Bonsignore) (hereinafter "Bonsignore").

Claims 1, 4, 9, 13, and 14 stand rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent Application Publication 2004/0063370 (Makiyama et al.) (hereinafter "Makiyama"). Claim 10 is rejected under 35 U.S.C. 103(a) as obvious over Makiyama. Claims 2 and 5 stand rejected under 35 U.S.C. 103(a) as obvious over Makiyama in view of U.S. 6,616,687 (Tomihata et al.) (hereinafter "Tomihata"). Claims 6-8 and 11-12 are rejected under 35 U.S.C. 103(a) as obvious over Makiyama in view of U.S. Patent Application Publication 2001/0036804 (Mueller et al.) (hereinafter "Mueller"). Claim 3 is rejected under 35 U.S.C. 103(a) as

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obvious over Makiyama in view of U.S. 6,585,574 (Lombardo et al.) (hereinafter "Lombardo") and U.S. Patent 6,923,926 (Walter et al.) (hereinafter "Walter").

The Office Action provisionally rejects claims 1-14 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending U.S. Patent Application No. 10/705,121.

*Discussion of the Restriction Requirement*

The Office Action sets forth a restriction requirement between the inventions of Group I (i.e., claims 1-14) and Group II (i.e., claims 15-25). Applicant elects, with traverse, the invention of Group I (i.e., claims 1-14) for further prosecution.

Applicant respectfully submits that the restriction requirement is improper in view of the amendments to the claims and for the reasons set forth herein and, therefore, requests withdrawal of the restriction requirement.

The M.P.E.P. recites the requirements for a proper restriction requirement. In particular, the M.P.E.P. states that there are two criteria for proper restriction between patentably distinct inventions: (a) the inventions must be independent, *and* (b) there must be a serious burden on the examiner in the absence of restriction. See M.P.E.P. § 803. These are two separate criteria that must be satisfied to support a proper restriction requirement. The fact that both criteria must be satisfied is made all the more clear by the following statement in the M.P.E.P.: "If the search and examination of an entire application can be made without serious burden, the examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions." M.P.E.P. § 803 (emphasis added). Thus, if the subject matter of the pending claims is such that there would be no serious burden on the Examiner to search and examine all of the pending claims at the same time, the Examiner is to do so, even if the pending claims are drawn to independent or distinct inventions.

With respect to the present application and the outstanding restriction requirement, Applicant submits that the inventions of Group I and Group II are so related that there will be no serious burden on the Examiner to search and examine all of the subject matter defined by the pending claims at the same time. The Office Action asserts that the biodegradable polymer product of claim 1 can be used in a materially different process than polishing, such as packing and waste disposal. However, amended claim 1 clearly recites in the body of the

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claim that the product comprising a biodegradable polymer is a polishing pad. The Office Action further asserts that the process for using the product can be practiced with another materially different product, such as a polishing pad that does not comprise a biodegradable polymer. However, Group II consists of claims 15-25, which are directed to a method of polishing a substrate with the polishing pad of amended claim 1 of Group I. If amended claim 1 defines patentable subject matter in view of the prior art, then claims 15-25 necessarily do so as well. Thus, there is significant overlap between the methods of using the polishing pad as defined by the claims of Group II and the polishing pad as defined by the amended claims of Group I.

In view of the foregoing remarks, Applicant respectfully requests withdrawal of the restriction requirement, such that all of the subject matter encompassed by the pending claims is considered at the same time.

In any event, Applicant notes that, if and when a product claim of elected Group I is found allowable, the nonelected method claims of Group II that depend from or otherwise include all of the limitations of the allowable product claim should be rejoined and considered. M.P.E.P. § 821.04.

*Discussion of the Section 102(b)/103(a) Rejections*

The Office Action rejects claims 1-5 and 13 as anticipated by or, in the alternative, as obvious over Bonsignore. The Office Action asserts that Bonsignore discloses biodegradable, transparent, self-supporting copolymer films made from biodegradable polymers that have repeat units of lactic acid. The Office Action also asserts that the preamble limitation "polishing pad" in the pending claims is of no consequence.

Since the preamble term "polishing pad" gives "life and meaning" to the claims and provides antecedent basis for the term "polishing pad" in the body of the claims, the term "polishing pad" is an element that defines the claimed invention and is of consequence in comparing the claimed invention to the cited reference. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 51 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

Even putting aside that point, however, Bonsignore fails to teach all of the elements recited in the currently pending claims. In particular, Bonsignore fails to teach a polishing pad that is in the form of a non-porous polymer sheet, a cellular polymer foam, or sintered thermoplastic particles as recited in the body (as opposed to the preamble) of the pending

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claims. Indeed, the Office Action "acknowledges that the reference is not literally directed to a polishing pad" (Office Action, p. 4).

In view of the foregoing, Bonsignore fails to teach or suggest all of the elements recited in the pending claims. As such, the anticipation and obviousness rejections are improper, and Applicant respectfully requests the withdrawal of the rejections.

The Office Action also rejects claims 1-14 as anticipated by and/or obvious over Makiyama alone or in combination with other references. The Office Action asserts that Makiyama discloses an abrasive sheet comprising a nonwoven fabric made up of lactic acid copolymers or polyglycolic acid.

However, Makiyama fails to teach all of the elements recited in the currently pending claims. In particular, Makiyama fails to teach a polishing pad that is in the form of a non-porous polymer sheet, a cellular polymer foam, or sintered thermoplastic particles as required by the pending claims.

Since Makiyama fails to teach or suggest all of the elements recited in the pending claims, the anticipation rejection is improper and should be withdrawn.

Moreover, the obviousness rejection is improper because there is nothing in the cited references that would suggest or motivate one of ordinary skill in the art to modify the nonwoven fabric disclosed in Makiyama so as to provide a polishing pad in the form of a non-porous polymer sheet, a cellular polymer foam, or sintered thermoplastic particles as required by the pending claims. Indeed, one of ordinary skill in the art would need to ignore the teachings of Makiyama regarding entangled ultrafine fibers in order to make the necessary modifications to provide the polishing pad in the form of a non-porous polymer sheet, a cellular polymer foam, or sintered thermoplastic particles.

Specifically, Makiyama teaches that nonwoven fabric is "structurally superior in cushioning property and surface smoothness" (paragraph 0010). Moreover, Makiyama teaches that "by using such a nonwoven fabric structure comprising fibers having random orientations as in the present invention, it is possible to form abrasive sheets having smoothness making use of the fineness of ultrafine fibers" (paragraph 0041). This is exemplified in the abrasive sheet of Example 1 comprising ultrafine fibers of 0.004 dtex (paragraph 0057). A disk substrate was polished with this abrasive sheet, yielding a textured disk with a surface roughness of 0.4-0.5 nm (paragraph 0058).

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As a result, one of ordinary skill in the art, having read Makiyama and the other cited references, would not have been motivated to modify the polishing pad disclosed in Makiyama so as to obtain a polishing pad in the form of a non-porous polymer sheet, a cellular polymer foam, or sintered thermoplastic particles. If anything, Makiyama teaches away from the polishing pad recited in the pending claims. Under the circumstances, the obviousness rejection is improper and should be withdrawn.

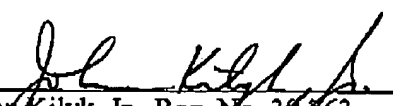
*Discussion of Non-Statutory Double Patenting Rejection*

Applicant acknowledges that claims 1-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly claiming an invention that is unpatentable over claims 1-16 of copending U.S. Patent Application No. 10/705,121. Applicant will address this rejection if and when the referenced application issues as a patent and the rejection is no longer provisional in nature.

*Conclusion*

Applicant respectfully submits that the present application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

  
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Date: December 28, 2005